

## NOTES

## Notes on The Naturalised Flora of Queensland.

Publication of the Flora of Australia has resulted in modern taxonomic treatments of many naturalised plant groups for the region. A number of succulent plants occur as sporadic naturalisations, but are rarely collected due to difficulty in the preparation of adequate herbarium collections. This paper updates several taxonomic treatments that have been recently published.

Just what constitutes a naturalised plant is debatable. Quite a number of exotic succulent plants are considered as naturalised in Australia. The criteria utilised in allocating this status to taxa of Agavaceae and Aloaceae (Pedley & Forster 1986, Forster & Clifford 1986) were that populations of the taxon had persisted and multiplied after abandonment of cultivation either in gardens or plantations. In some instances, certain taxa are believed to have potential for naturalisation due to wide cultivation, e.g. *Aloe vera* (L.) N.L. Burman (Forster & Clifford 1986) or *Tillandsia usneoides* (L.) L. (Conran 1987). Telford (1984) treated *Hylocereus undatus* (Haw.) Britton & Rose and *Nyctocereus serpentinus* (Lagasca & Rodriguez) Britton & Rose as naturalised. Both are occasional escapes from cultivation, but hardly serious weed species. Examination of two cited sites of naturalisation for *H. undatus* (G.W.C. Marlowe (BRI) and Telford 8739 (CBG)) has revealed isolated large plants which have not spread widely from the original sites of cultivation or dumping. I have subsequently collected *H. undatus* next to the 'Merri Merri' Housing Estate Park, Chapel Hill, 1.7 km SW of Mt Coot-tha Lookout, 27°29'S, 152°57'E (Forster 2526 & Bird (BRI)) and *N. serpentinus* at Ma Ma Creek, 2 km SW of Mount Whitestone township, 27°41'S, 152°09'E (Forster 2261 & Bird (BRI)).

***Epiphyllum phyllanthus* var. *hookeri* (Cactaceae): a new naturalisation for south-eastern Queensland.**

Species and hybrids (some interspecific, but mainly intergeneric) of *Epiphyllum* and other epiphytic cacti have long been cultivated and are much prized by horticulturalists. A number were offered in the Australian nursery trade as early as 1843 (Swinbourne 1982). In Australia, species of some eight genera of cacti were considered naturalised by Telford (1984). However none of these are truly epiphytic (without root contact with the ground). The recording of *Epiphyllum phyllanthus* var. *hookeri* as naturalised in Australia adds an epiphytic cactus to the naturalised flora. Additional collections of *Hylocereus* and *Nyctocereus* have also recently been made.

In September 1985, material of *Epiphyllum phyllanthus* (L.) Haw. var. *hookeri* (Haw.) Kimnach was collected in an abandoned garden 3 km SSE of Mount Whitestone township, 17 km SSW of Gatton, 27°42'S, 152°10'E (Forster 2164 & Bird (BRI)). This had formed an extensive population over fences and trees within an area encompassing under 100 m<sup>2</sup>, and was probably due to vegetative reproduction.

*E. phyllanthus* is a variable species with some six formally recognised varieties (Kinnach 1964) and was in European cultivation by 1732 (Barthlott & Rauh 1974, 1975). *E. phyllanthus* var. *hookeri* is common in general cultivation in Australia and is often to be seen in old gardens. It is usually referred to as *E. strictum* Britton & Rose, a name which was included in the synonymy of *E. phyllanthus* var. *hookeri* by Kimnach (1964). Barthlott & Rauh (1974, 1975) noted that cultivated *E. phyllanthus* var. *phyllanthus* often set fruit with viable seed. Plants of *E. phyllanthus* var. *hookeri* cultivated at Didcot, 25°28'S, 151°52'E, often set fruit (in the absence of other *Epiphyllum* species or intergeneric hybrids in flower) from which plants indistinguishable from the parent in both vegetative and reproductive morphology have been grown.

*E. phyllanthus* var. *hookeri* produces a fleshy, red coated fruit, not dissimilar in general appearance to that of some *Opuntia* and *Eriocereus* species. It is conceivable that bird dispersal of seed could occur, as has been observed with *Opuntia* and *Eriocereus* (Johnston 1978, Mann 1970). Due to the spineless nature of the flattened cladodes, long-range vegetative dispersal of *E. phyllanthus* var. *hookeri* is unlikely.

Inserting the following couplet into Telford's (1984) generic key will enable determination of material of this plant.

2 Stem-segments compressed

2A

2A Flowers with floral tube >5 cm long

EPIPHYLLUM

2A: Flowers with floral tube <5 cm long

OPUNTIA

*Epiphyllum* Haw., Syn. pl. succ. 197 (1812).

Type: *E. phyllanthus* (L.) Haw.

Stems epiphytic, spineless, long-jointed, leaf-like, flat or sometimes 3-winged; often with aerial roots. Flowers mostly nocturnal, elongate, funnel-shaped or salver-shaped, white or yellowish. Perianth spreading to rotate, segments usually linear-lanceolate. Stamens numerous, filaments inserted in tube and around throat; anthers exserted. Style elongated, stigma-lobes linear, exserted. Fruit fleshy, globular to oblong, bearing scales, splitting along one side when ripe. Seeds numerous, ovate-reniform, testa shiny black.

**Epiphyllum phyllanthus** (L.) Haw. var. **hookeri** (Haw.) Kimnach, Cact. Succ. J. (Los Angeles) 36: 113 (1964), (with excellent illustration).

*Epiphyllum hookeri* Haw., Philos. Mag. 6: 108 (1829).

*Epiphyllum strictum* Britton & Rose, Contr. U.S. Natl. Herb. 16: 259 (1913).

Stems erect or pendant, terete or subterete near base, strongly trigonous for up to ca 50 cm, then flattened for up to 150 cm of total length; to 6–9 cm wide; areoles ca 3–8 cm apart. Flowers 17–23 cm long, limb 10–15 cm wide; receptacle 16–19.5 cm long, ca 7 mm wide; podaria to 14 cm long, ca 3 mm wide, up to 1 mm high; petaloid lobes white. Fruit 4–7 cm long, 3–3.5 cm diameter, red; pulp white. Seeds 3.25–3.5 mm long, 1.75–2 mm wide, 1–1.5 mm thick.

#### Additional records of *Aloe* (Asphodelaceae) naturalised in Australia.

The Flora of Australia account of Aloaceae described four species of *Aloe* as naturalised, and commented that few collections existed in Australian herbaria (Forster & Clifford 1986). In the system of classification proposed by Dahlgren *et al.* (1985), the genus *Aloe* is included in the family Asphodelaceae which is used here.

Reid (1987) has commented that *Aloe saponaria* (Aiton) Haw. is a synonym of *A. maculata* All., citing the study of Dandy (1970). Wijnands (1983) by comparison, considered that *A. maculata* was a homotypic synonym of *Gasteria carinata* (Mill.) Duval, and outlined some of the problems surrounding the typification of *A. saponaria*. Wijnands did not refer to the work of Dandy and until the typification of the taxon presently called *Aloe saponaria* (Aiton) Haw. is satisfactorily resolved, it is recommended that the name (which has been long in common usage) is continued to be utilised.

Under the account of *Aloe saponaria* (Aiton) Haw., material of an apparent hybrid (Forster 1718 & Sharpe) was discussed. H.R. Toelken (AD) has subsequently suggested (in litt.) that this material is similar to that described as *A. saponaria* var. *ficksburgensis* Reynolds. On re-examination of the material and Reynolds's (1950) treatment of *A. saponaria*, I would agree with this and an appropriate account is given here. As well several additional distribution records for other naturalised taxa are given. Species numbering is as in Forster and Clifford (1986). These data may be inserted on pages 66–70 of the Flora of Australia treatment.

#### 1. *Aloe arborescens* Miller

**South Australia.** Near boat ramp, at Pine Pt, Yorke Peninsula, Sep 1985, *Conran* 304 (AD,BRI,MUCV). **Queensland.** MORETON DISTRICT: 'Merri Merri' Housing Estate, Chapel Hill, 1.7 km SW of Mt Coot-tha Lookout, Aug 1986, *Forster* 2531 & *Bird* (BRI).

This is the first herbarium record of this species for Queensland. Batianoff and Sharpe (1987) also record *A. arborescens* for Point Arkwright and Point Perry on the Sunshine Coast.

**2. Aloe saponaria** (Aiton) Haw.

Two varieties are recognised here.

Pedicels *ca* 35–45 mm long

Pedicels *ca* 25 mm long

**2a. var. saponaria**

**2b. var. ficksburgensis**

**2a. Aloe saponaria** (Aiton) Haw. var. **saponaria**

Racemes densely capitate-corymbose, 12–20 cm diameter, pedicels 35–45 mm long, perianth 35–45 mm long, raceme bracts one-third to one-half length of pedicels.

**Queensland.** MORETON DISTRICT: Ma Ma Creek, 2 km SW of Mt Whitestone, 27°41'S, 152°09'E, Oct 1985, *Forster* 2260 & *Bird* (BRI).

**2b. Aloe saponaria** var. **ficksburgensis** G. Reyn., J. S. African Bot. 3: 148 (1937).

T: Molen Spruit, 4 miles west of Ficksburg, Sep 1936, *Reynolds* 2087 (PRE, *n.v.*).

Illustrations: G.W. Reynolds, *The Aloes of South Africa* 227 (1950), figs 232–233, *Forster & Clifford*, *Fl. Australia* 46: 69, fig. 13A–B.

Racemes broadly conical, *ca* 8 cm diameter, pedicels 25 mm long, perianth *ca* 35 mm long, raceme bracts as long as pedicels.

**Queensland.** BURNETT DISTRICT: 15 km NNW of Murgon, Feb 1984, *Forster* 1718 & *Sharpe* (BRI).

At this locality, what appeared to be a single clone had formed an extensive colony covering some several hundred square metres under eucalypt open forest on a south facing slope. Associated was a large naturalisation of *Agave americana* L. var. *americana*. The site had been abandoned as a homestead in 1938 (H. Sharpe, pers. comm. 1985).

**4a. Aloe vera** (L.) N.L. Burman var. **vera**

**Western Australia.** Agricultural Lot 21 North West, Coastal Hwy, Northampton, 28°21'S, 114°38'E, Aug 1984, *Crossdale* AQ440661 (BRI). **Queensland.** MORETON DISTRICT: Junction View near Gatton, 27°48'S, 152°11'E, Feb 1985, *Binglee* AQ450800 (BRI).

Although it is not indicated on the specimen labels, these collections probably represent cultivated material.

**Acknowledgments**

I would like to thank L. Pedley for reading and commenting on part of the manuscript. H. Sharpe initially informed me about the naturalisation of *Aloe* near Murgon and subsequently organised two visits to the site.

**References**

- BARTHLOTT, W. & RAUH, W. (1974, 1975). Some notes on the morphology, palynology and geographical variability of *Epiphyllum phyllanthus* (L.) Haw. (Cactaceae). *National Cactus and Succulent Journal* 29: 113–115, 30: 8–10.
- BATIANOFF, G.N. & SHARPE, P.R. (1987). Appendix I. Catalogue of plants of the Sunshine Coast, Qld (Mt Coolool to Noosa National Park). In Batianoff, G.N., *Plants of the Sunshine Coast Queensland*. Fortitude Valley: Society for Growing Australian Plants (Queensland Region) Inc.
- CONRAN, J.G. (1987). Bromeliaceae. In A.S. George (ed.), *Flora of Australia* 45: 12–15. Canberra: Australian Government Publishing Service.
- DAHLGREN, R.M.T., CLIFFORD, H.T. & YEO, P.F. (1985). *The Families of the Monocotyledons*. Berlin: Springer/Verlag.
- DANDY, J.E. (1970). Annotated list of the new names published in Allioni's *Auctarium ad Synopsis Stirpium Horti Reg. Taurinensis*. *Taxon* 19: 617–626.
- FORSTER, P.I. & CLIFFORD, H.T. (1986). *Aloeaceae*. In A.S. George (ed.), *Flora of Australia* 46: 66–70. Canberra: Australian Government Publishing Service.

- JOHNSTON, T.N. (1978). The growth and control of *Harrisia* cactus on a State Forest in southern inland Queensland. Department of Forestry Queensland, Research Paper No. 10.
- KIMNACH, M. (1964). *Epiphyllum phyllanthus*. *Cactus and Succulent Journal (Los Angeles)* 36: 105–115.
- MANN, J. (1970). Cacti Naturalised in Australia and their Control. Brisbane: Department of Lands.
- PEDLEY, L. & FORSTER, P.I. (1986). Agavaceae. In A.S. George (ed.) *Flora of Australia* 46: 71–88. Canberra: Australian Government Publishing Service.
- REID, C. (1987). Book Review. *Flora of Australia* (Vol. 46). *Bothalia* 17: 155.
- REYNOLDS, G.W. (1950). The Aloes of South Africa. Cape Town: Balkema.
- SWINBOURNE, R.F.G. (1982). The history of cacti and succulents in Australia, 1787–1981. *Calandrinia* 2: 36–41.
- TELFORD, I.R.H. (1984). Cactaceae. In A.S. George (ed.), *Flora of Australia* 4: 62–80. Canberra: Australian Government Publishing Service.
- WIJNANDS, D.O. (1983). The Botany of the Commelins. Rotterdam: A. A. Balkema.

**P. I. Forster**

**Botany Department, University of Queensland, St Lucia, Qld 4067**

## CORRIGENDUM

### **Austrobaileya 2(4) 1987**

**p 328, 332.** The correct spelling of the specific epithet of *Diploglottis berniana* should be '*bernieana*'.

**p 347. line 20** should read **Racosperma cretatum**

**p 354. line 36** should read **Racosperma resinicostatum**

**p 355. line 11** should read **Racosperma salignum**

**p 356. line 18** should read **Racosperma tenuinerve**

**p 357. line 1** should read **Racosperma uncinatum**

**p 361.** The captions for Fig. 1C and D have been reversed. C is the rhizome palea. D is the indusium.